



Why Choose a GORE® Acoustic Vent?

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Gore has an unsurpassed track record in delivering global venting solutions. As the worldwide leader in venting technology, we've engineered unique venting materials and structures for everything from medical and industrial applications to GORE-TEX® fabrics for consumer outerwear. And for more than a decade, our products, resources and expertise have helped leading OEMs build more advanced venting into thousands of acoustic devices.

GORE® Vents combine the best materials with the best design expertise. Whether you choose a standard or custom venting solution, we can help you achieve the optimal balance of acoustic transparency and environmental protection.

The Right Materials, Expertly Engineered for the Demands of Your Application

Exceptional Sound Quality with the GAW300 and GAW500 Series of GORE® Acoustic Vents for Immersion Protection

GORE® Acoustic Vents for immersion applications are engineered from expanded polytetrafluoroethylene (ePTFE), a materials technology with a unique structure that optimizes vent performance and device reliability.

ePTFE Structure

The ePTFE structure consists of nodes, fibrils and pores. This structure facilitates the transmission of air and sound, while effectively repelling water, other fluids and particulates.

Acoustic Transparency

For acoustic applications, we have engineered a special ePTFE membrane that is thin and low-mass for optimal transmission of

sound. It vibrates easily and quickly in response to sound waves, converting their airborne energy to mechanical vibrations. These vibrations are reproduced on the other side of the membrane to create high-quality acoustics.

Pressure Equalization

The optimal transmission properties of ePTFE also enable the vent structure to rapidly equalize pressure changes, protecting sensitive electronics against condensation and minimizing stress on device seals.

Environmental Protection

Immersion Protection: Although ePTFE membrane is thin, its unique structure is engineered to repel water effectively and protect devices against immersion up to IP68 standards.

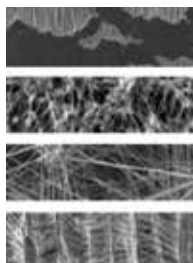
Fluid Resistance: Gore has developed oleophobic venting materials that effectively repel oils, sweat, cleaning solutions and other common fluids that can threaten ordinary vent materials and device reliability.

Exceptional Protection with GORE® Acoustic Vents For Dust and Splash Applications

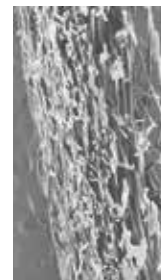
GORE® Acoustic Vents for dust and splash protection are designed from non-woven structures. Unlike woven materials, Gore's non-woven materials are engineered specifically for protecting portable electronics. These products deliver the best dust and splash protection on the market at their given acoustic level.

Small Particle Protection

Gore's non-woven vent structures use a complex, three-dimensional microstructure that creates a tortuous path to trap even small particles with much greater efficiency than ordinary woven mesh vents. While woven vents provide only a single layer of protection for a defined pore size, the complex structure of Gore's non-woven material creates a more effective barrier to particles of varied sizes.



ePTFE construction of Series GAW300 and GAW500 for immersion protection as seen under magnification



Construction of Series GAW100 and GAW200 for dust and splash protection as seen under magnification

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Water Spray Protection

The three-dimensional structure of Gore's non-woven material, combined with its torturous path construction, provides a higher level of spray protection for a given acoustic performance. The IPx4 test standard for spray protection typically requires a high-performance vent as well as a housing designed to divert water and help block spray. Gore has developed a spray test to simulate a single nozzle from an IPx4 test to help customers understand a venting material's efficiency at preventing water ingress independent of housing design.

Oleophobic Protection

As with our ePTFE structures, oleophobic materials developed by Gore are also available in our non-woven structures. These materials are extremely effective at resisting a range of common fluids (from perspiration and oils to cleaning solutions) that could degrade ordinary vent materials and device reliability.

The Right Resources: Global Design, Engineering Expertise and Support

Acoustic Expertise

The global GORE® Portable Electronic Vents (PEV) team has extensive expertise in acoustical engineering, as well as worldwide acoustical testing facilities where we develop venting technologies and evaluate customer solutions. At Gore, we understand the effects that the type of acoustic transducer, vent size, acoustic chamber volumes and part spacing have on a device's performance. We can look at overall acoustic system designs, and acoustic test results from frequency response, distortion, rub and buzz, and impedance to help our customers engineer or troubleshoot a vent design.



Portable Electronic Vents

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Application Experience

With over a decade of experience and designs in thousands of portable electronics devices, Gore is uniquely qualified to provide or develop optimal venting solutions for a wide range of applications. Our application experts can help select the right vent materials, adhesives and part constructions, and they provide design guidelines for best results.

Our process is guided by a principle we call "fitness for use." Put simply, it's our commitment to deliver products that meet our customers' expectations and the demands of the intended end use. By focusing on our customers' ingress protection needs, acoustic requirements, and spatial constraints, we design a solution that represents the best possible fit for the demands of that specific application.

Consistent Production Quality

With over 60 years of experience in fluoropolymer science, Gore is the global leader in venting materials and technology. Our worldwide research, testing and production facilities employ stringent quality processes and manufacturing practices. Together, they ensure our products meet the most rigorous performance standards . . . and do so consistently and reliably.

Global Support

The portable electronics industry, and its design, manufacturing and customer locations, are global in scope. Gore has global sales, application engineering and testing facilities to support our customers from initial design to manufacturing, and through the product life cycle.

For more information on acoustic vent technology, click over to gore.com/portableelectronics and see these articles:



The Science of Acoustic Vent Selection



Of Sound Design

Contact Gore to learn about the right GORE® Portable Electronic Vent for your unique application.

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